

Application No. 10/001,494
Attorney Docket No. 12598US03

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

Claims 1-20 (Canceled)

C 1
21. (Original) A method of forming individual strips of edible material, said method including the steps of:

 providing an ultrasonic slitting tool, having at least a pair of cutting edges, said cutting edges being spaced apart a given distance equal to the width of a strip to be formed therewith; and

 contacting an edible material with said ultrasonic slitting tool to form at least one strip of edible material, wherein the cutting edges of said slitting tool are oriented at an approximate angle of 40 degrees to 60 degrees with respect to the horizontal plane of said edible material.

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22. (Original) The method of claim 21 wherein said slitting tool includes at least three cutting edges which form at least a pair of adjacent strips of edible material, said method further comprising the step of increasing the dimensional spacing between said adjacent strips immediately after the formation thereof in said slitting station.

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3 23. (Original) The method of claim 21 wherein said slitting tool includes a horn having integrally formed blades and said cutting edges are formed on said blades.

4 24. (Original) The method of claim 23 wherein the said cutting edges of said blades are at said anti-node portion of said tool.

5 25. (Original) The method of claim 21 wherein said slitting tool vibrates in an axial direction upon the energization thereof.

6 26. (Original) The method of claim 21 wherein said slitting tool includes a horn having separately formed blades which are fixed to said horn and said cutting edges are formed on said blades.

7 27. (Original) An apparatus for slitting an edible material, said apparatus comprising:

an input conveyor for supplying edible material; and

an ultrasonic slitting tool which includes an ultrasonic horn having at least a pair of parallel cutting edges spaced apart a distance equal to the width of a strip of edible material to be formed, said cutting edges being positioned to contact said edible material as said edible material is supplied to said ultrasonic slitting tool by said input conveyor, wherein

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each of said cutting edges is oriented at an approximate angle of 40 degrees to 60 degrees with respect to the plane of said input conveyor.

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28. (Original) The apparatus of claim 27 wherein said horn and said at least a pair of parallel cutting edges are integrally formed.

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29. (Original) The apparatus of claim 27 wherein said at least a pair of cutting edges are formed in separate blades which are fixed to said horn.

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30. (Original) The apparatus of claim 27 wherein said input conveyor comprises a plurality of separate conveyor strips which are spaced apart at a sufficient distance to permit said cutting edges to be received therebetween.

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31. (Original) The apparatus of claim 27 wherein said slitting tool includes at least three cutting edges which are spaced and positioned to form at least a pair of adjacent strips of edible material, said apparatus further comprising means for increasing the dimensional spacing between adjacent strips immediately after the formation thereof in said slitting station.

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32. (Original) The apparatus of claim 27 wherein a plurality of said cutting edges are included in each of a plurality of ganged ultrasonic stacks.

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33. (Original) The apparatus of claim 32 wherein each of said cutting edges is formed on a slitter blade which is oriented at an acute angle of about 45 degrees with respect to the plane of said input conveyor.

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34. (Original) A system for ultrasonically slitting edible material including:
an ultrasonic slitting tool for slitting edible material, said ultrasonic slitting tool having a plurality of cutting edges, each of said cutting edges oriented at an angle other than perpendicular with respect to said edible material.

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35. (Original) The system of claim 34 wherein the amplitude of vibration over each of said cutting edges is uniform.

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36. (Original) A system for ultrasonically slitting edible material including:
an ultrasonic slitting tool having a plurality of cutting edges, wherein the amplitude of vibration over a plurality of said cutting edges is uniform.

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37. (Original) The system of claim 36 wherein each of said cutting edges is oriented at an approximate angle between 40 degrees and 60 degrees with respect to a horizontal plane.

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38. (Original) A method of ultrasonically slitting edible material including the steps of:

orienting a plurality of cutting edges of a slitting tool at an angle other than perpendicular with respect to an input conveyor supporting edible material; and
slitting said edible material using said slitting tool.

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39. (Original) A method of ultrasonically slitting edible material using an ultrasonic slitting tool having a plurality of cutting edges, said method including the step of:

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uniformly applying an amplitude of vibration over said cutting edges; and
slitting said edible material with said ultrasonic slitting tool wherein the amplitude of vibration over said plurality of said cutting edges is uniform.

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40. (Original) A system for ultrasonic processing of edible material, said system including:

a plurality of ultrasonically activated horns; and
a conveyor supplying a slab of edible material to said plurality of ultrasonically activated horns to process said edible material,

wherein at least one of said horns is oriented at an angle of about 20 degrees to about 70 degrees with respect to the horizontal plane of said conveyor.

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21. (Original) A system for ultrasonic processing of edible material, said system including:

a plurality of ultrasonically activated blades; and

a conveyor supplying a slab of edible material to said plurality of ultrasonically activated blades to process said edible material,

wherein at least one of said blades is oriented at an angle of about 20 degrees to about 70 degrees with respect to the horizontal plane of said conveyor.

22. (Original) A method of ultrasonically processing edible material, said method including the steps of:

providing a plurality of ultrasonically activated horns; and

supplying a slab of edible material on a conveyor to said plurality of ultrasonically activated horns to process said edible material,

wherein at least one of said horns is oriented at an angle of about 20 degrees to about 70 degrees with respect to the horizontal plans of said conveyor.

23. (Original) A method of ultrasonically processing edible material, said method including the steps of:

providing a plurality of ultrasonically activated blades; and

supplying a slab of edible material on a conveyor to said plurality of ultrasonically activated blades to process said edible material,

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about 70 degrees with respect to the horizontal plane of said conveyor.